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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
|-----------------|-------------|----------------------|---------------------|

09/718,611 11/21/00 MANKARUSE

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EXAMINER

THOMPSON, G

ART UNIT

PAPER NUMBER

2835

DATE MAILED:

09/27/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/718,611

Applicant(s)
Mankaruse

Examiner
Gregory Thompson

Art Unit
2835



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Nov 21, 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other:

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1. The drawings are objected to because sectional views 2.2-2.2, 2.3-2.3 are not understood with respect to fig. 2.1. It was discussed with Mr. Mankaruse on 8/18/01 that it appears figs. 2.2, 2.3 should be reversed since elements 2-8 appear to be on top of board 1 in fig. 2.1. Correction is required.

2. The disclosure is objected to because of the following informalities: page 6, line 21 language of "third. selecting" confusing. The disclosure is full of incorrect reference numbers. Some examples follow. The entire disclosure and drawings should be carefully reviewed for correct reference number and other informalities. Page 10, lines 16, 23, 27 number 3 referenced to as heat exchanges and conductive base. Lines 17, 23, 28 number 4 referred to as disconnected, heat pipe. Number 5 referred to as disconnect, filler material on pages 10-11. Number 7 referred to as component, solder, adhesive on page 10. Above are just examples of incorrect numbering with respect to disclosure and drawings.

Appropriate correction is required.

3. Claims 1-4, 6-8, 10-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 15 no clear antecedent for "the embedded heat pipe". To clear this problem up in line 14 use this language after phrase "including embedded heat pipes".

Claims 2-4 language of "at least one of the circuit board assembly, at least one thermally conductive base, at least one heat pipe thermal" is not consistent language with claim 1 for the

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language of "at least one" can mean one or more than one and claim 1 clearly recites "a board assembly, a base, an a plane". Use consistent language. Language of "further comprise" is not understood at all. It all the elements are joined by brazing material clearly claim this feature.

Claims 6-8 confusing with the language of "at least one of the thermally conductive base" with respect to language of "a ... base" in claim 5 as discussed with respect to claims 1-4 above. Use consistent language with respect to the base in claims 6-8.

Claims 10-12 contain same inconsistent language as discussed with respect to claims 2-4 as discussed above. Also, language of "further include" is not understood at all. Maybe deleting the language "further include and" would be clearer language.

All claims should be carefully reviewed for 112 problems and corrected.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Tanaka et al.

The board is 2, conductive base with recesses is 4, the plane with heat pipes embedded therein is 10. Plane 10 is engaged with base 4 by the pipes.

The heat exchanges (board term) would be the fins 11, 12 or 13. The filler material would be 7. All structural elements are joined with respect to claim 5 to provide an apparatus.

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4, 6-8, 10-12 rejected under 35 U.S.C. 103(a) as being unpatentable over
Tanaka et al.

Considered obvious to one skilled to use the common brazing or securement material of
adhesive or solder to attach the elements of Tanaka together to provide an apparatus.

6. The prior art made of record and not relied upon is considered pertinent to applicant's
disclosure. Galyon et al discloses a recessed plate.

7. Any inquiry concerning this communication should be directed to Greg Thompson at
telephone number (703) 308-2249.

Thompson/nt

8/27/01


Gregory Thompson
Primary Examiner